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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,102	03/26/2004	James Jolly Clark	5853-00508	8038

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EXAMINER

RAO, SHEELA S

ART UNIT PAPER NUMBER

2125

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,102

Applicant(s)

CLARK ET AL.

Examiner

Sheela Rao

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/7/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-23 are pending and presented for examination.
2. Applicant's submission of references on form PTO-1449, filed May 7 2004, has been considered.
A signed copy of the form is attached.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 8-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Stashkiw et al., US Patent No. 5,847,568.

Stashkiw et al. (hereinafter, "Stashkiw") teach a control system for regulating irrigation. The system and method used by Stashkiw anticipates the system and method of the instant invention as claimed. As per claims 1 and 16, the use of a computer system is taught by the patented reference through the use of the control unit that controls and monitors the functions of the irrigation system. In addition, the control unit is configured to control irrigation based on the level of moisture of the area or zone to be watered, see col. 2: ll. 17-45, col. 3: ll. 52 et seq., and the abstract. A moisture probe is used for sensing and assessing the moisture level of the watering zone as does the sensing unit of the instant invention, see col. 2: ll. 20-45 and col. 5: ll. 1-14. The presence of a collector for receiving moisture and evaluating the level is taught by Stashkiw with the use of a valve that performs the same tasks as the collector of the instant invention, see col. 2: ll. 34-45.

The configuration of the computer system to inhibit or assess irrigation if the moisture level is greater than a predetermined amount as well as the assessment of zonal evapotranspiration being based

on the moisture level in the collector as per claims 2, 3, 4, and 19-20, is taught by Stashkiw at column 2, beginning at line 20; wherein the method for water distribution is disclosed.

The use of a green colored collector to approximate or match the color of the vegetation in the area of irrigation as per instant claims 9 and 10 is entirely a decision based on design choice, as the color of the collector has no direct bearing on the system or method of functionality of the invention.

Furthermore, the color of the collector does not constitute patentable distinctness.

The computer system assessing the need for irrigation based on the output of the sensing unit as per instant claims 11 and 21, the reference of prior art teaches the moisture probe sending a signal to the control unit according to the amount of moisture in the soil. The control unit then evaluates this signal and the need for irrigation is determined, see col. 5: ll. 1-13. The operation of the valves by the computer system as claimed by instant claim 12 is taught by Stashkiw at column 4, lines 9-11 and column 5, lines 10-13, wherein the control unit is described as supplying power for the operation of the valves. The coupling of the valves to one or more conduits that are configured to carry water, as per claim 13, is taught at column 4, lines 17-24. Instant claim 14 carries the limitation of claim 13 further wherein the use of irrigation devices is coupled to the conduits, Stashkiw teaches the coupling of the conduits and the irrigation devices as claimed at column 4, lines 32-43. Claim 15 further extends the coupling of the valves and conduits to include a configuration where the conduit is able to carry water and the source of water is also coupled to the conduit, this feature is taught by the patented reference at column 4, lines 17-25.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stashkiw et al., US Patent No. 5,847,568, in view of Moore, US Patent No. 6,363,781 B1.

The limitations of claims 1 and 16 are taught by Stashkiw as aforementioned in paragraph 4.

Stashkiw teaches the use of a sensing unit with a collector in the form of a moisture probe with a valve. However, the shape and contour of the collector or valve as being tapered, curved taper, and comprising a lip, as per instant claims 5, 6, 7, and 8 is not taught or suggested. For this reason, the rain gauge as disclosed by Moore is relied upon. The patented rain gauge by Moore as depicted in drawing figures 3 and 4 is shown to have a conical or curved shape with a lip and is used to measure the collection of moisture or rain. The use of the rain gauge or collector assembly for measuring depth or volume as per instant claims 17 and 18 is taught by Moore at column 2, lines 44-46, wherein it is stated that the rain collection cylinder contains indicia to indicate the amount of rain fall. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the cone shaped collection device as that in the patent to Moore with the sensing probe of Stashkiw so as to have a collection cup or device to easily collect and assess the volume or depth of moisture collected; because accurate assessments of collected samples enable sufficient and proper irrigation amounts and cycles.

7. Claims 16 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stashkiw et al., US Patent No. 5,847,568, in view of Hergert, US Patent No. 6,108,590.

The limitations of instant claim 16 are taught by Stashkiw as aforementioned in paragraph 4.

Stashkiw teaches the assessing of moisture data in controlling the operation of an irrigation system. However, the use of climatological conditions, specifically, for controlling irrigation is not taught. The patented invention of an irrigation optimization system by Hergert teaches the determination of soil condition through the use of current and/or historical weather data as it is determined from remote sensors or satellites, see the abstract and column 4, lines 26-31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the control unit of Stashkiw with the weather data as obtained by Hergert for use in evaluating the soil condition for irrigation purposes. The use of climatological data in assessing irrigation needs would maximize yield and enable precise watering cycles.

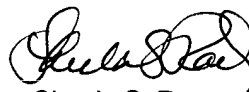
8. For the reasons stated above in paragraphs 4, 6 and 7, the limitations of the claimed invention are taught by the prior arts of record; thereby, rendering the instant claims unpatentable.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. The fax number for the organization where this application or any proceeding papers is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sheela S. Rao
Patent Examiner
Art Unit 2125